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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,697	10/07/2003	Choong Un Lee	054358-5017	3567

9629 7590 03/22/2005

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EXAMINER	
DUONG, THOI V	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/679,697	LEE ET AL.	
	Examiner	Art Unit	
	Thoi V. Duong	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 07 October 2003.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-12 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 8 are indefinite since Figs. 3A and 3B of the invention show that there are only two mother substrates 30 and 31 while claims 1 and 8 recite four substrates altogether: first substrate and second substrate formed on first mother substrate and second mother substrate.

In the following, the Examiner will interpret that the plurality of first and second substrates are to be included in the first and second mother substrates respectively.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kodera et al. (Kodera, USPN 6,195,149 B1).

Re claim 1, as shown in Figs. 28-31, Kodera discloses a method of fabricating a liquid crystal display panel, comprising:

forming a plurality of first substrates having at least two different sizes (see items 1b and 19 in Fig. 13) and a plurality of second substrates having at least two different sizes (see items 4b and 29 in Fig. 15) on first and second mother substrates 101 and 104 respectively, wherein the first mother substrate includes the first substrates and the second mother substrate includes the second substrates;

forming sealant patterns 106 on at least one of the mother substrates 101;

attaching the first and second mother substrates 101 and 104 to each other (Fig. 28);

forming the first cutting lines 108 on each of the first and second mother substrates 101 and 104 (col. 1, lines 35-36), wherein the first cutting lines 108 separate a first unit liquid crystal display panel 110a, and the first cutting line 108 is extended to the sealant pattern 106 (Figs. 28 and 29);

forming the second cutting lines 118 on each of the first and second mother substrates 101 and 104, wherein the second cutting lines 118 separate a second unit

liquid crystal panel 119 (Figs. 30 and 31) and the first unit 110a is larger than the second unit 119;

separating a plurality of the first and second unit liquid display panels from the attached mother substrates 101 and 104; and

injecting a liquid crystal into the separated first and second unit liquid crystal panels (col. 1, lines 46-51).

Re claim 4, the sealant patterns 16 are formed on non-display regions of the liquid crystal display panels.

Re claim 6, as shown in Fig. 28, sizes of the first and second substrates facing into each other by attaching the first and second mother substrates are substantially the same with each other.

5. Claim 8 rejected under 35 U.S.C. 102(e) as being anticipated by Shiraishi (USPN 6,864,947 B2).

As shown in Figs. 8A and 8B, Shiraishi discloses a method of fabricating a liquid crystal display panel, comprising:

forming a plurality of first substrates having at least two different sizes (20a and 31) and a plurality of second substrates having at least two different sizes (20a and 31) on first and second mother substrates 12 and 11, respectively, wherein the first mother substrate includes the first substrates and the second mother substrate includes the second substrates;

forming sealant patterns 2 on at least one of the mother substrates 11;

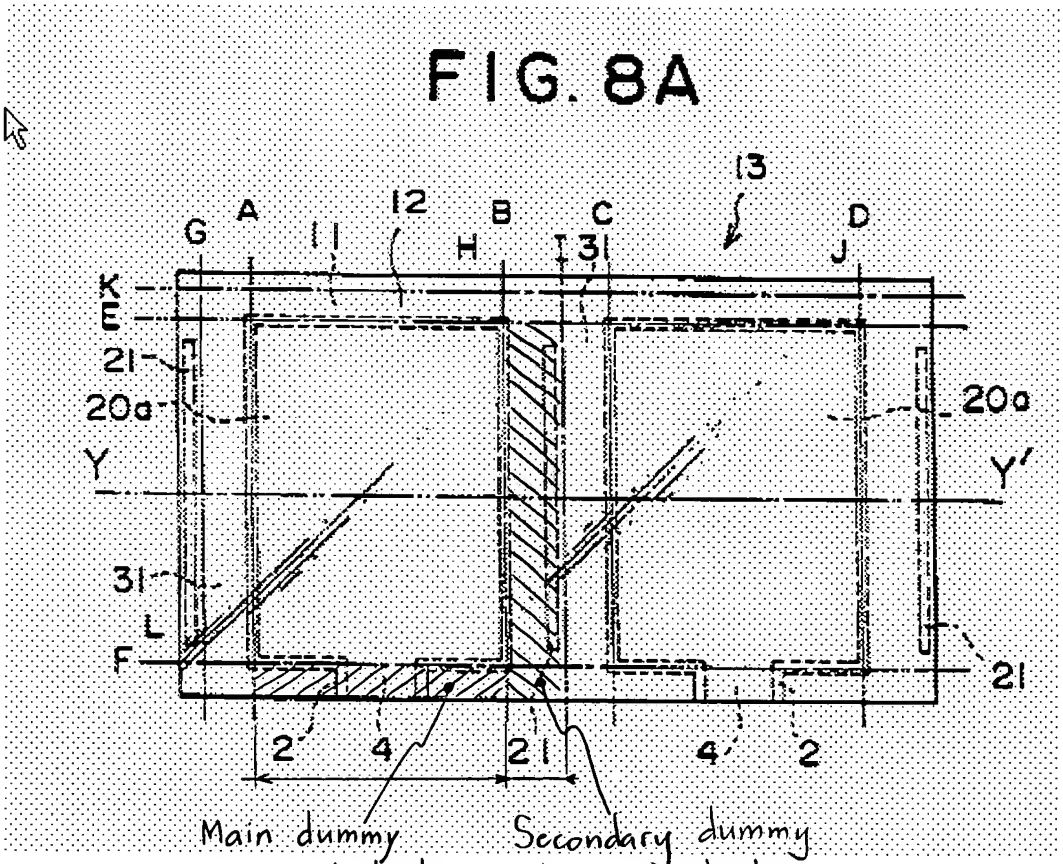
attaching the first and second mother substrates to each other (Fig. 8B);

forming first and second cutting lines G-L and A-D on each of the first and second mother substrates (Figs. 7A and 7B); and

separating a plurality of first and second unit liquid crystal display panels 20a from the attached mother substrates,

wherein the attached mother substrates include main dummy glass substrates and secondary dummy glass substrates divided by the first and second cutting lines H and B, and the sealant patterns 2 are located to be extended to the first cutting lines H between the main dummy glass substrates and the secondary dummy glass substrates (see Fig. 8A below).

FIG. 8A



Re claim 9, the method of Shiraishi further comprises injecting a liquid crystal into the separated unit liquid crystal display panels 20a (col. 9, lines 20-25).

Re claim 11, as shown in Fig. 8B, sizes of the first and second substrates facing into each other by attaching the first and second mother substrates 11 and 12 are substantially the same with each other.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2, 3, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodera et al. (Kodera, USPN 6,195,149 B1) in view of Nakahara et al. (Nakahara, USPN 6,239,855 B1).

Re claim 7, as shown in Fig.11, Kodera discloses the second substrates 4 having a plurality of thin film transistors and a plurality of pixel electrodes 7, and the first substrates 1 having a common electrode 2 (col. 3, lines 38-52 and col. 8, lines 29-64).

However, Kodera does not disclose a method for forming a plurality of color filters on the first substrates.

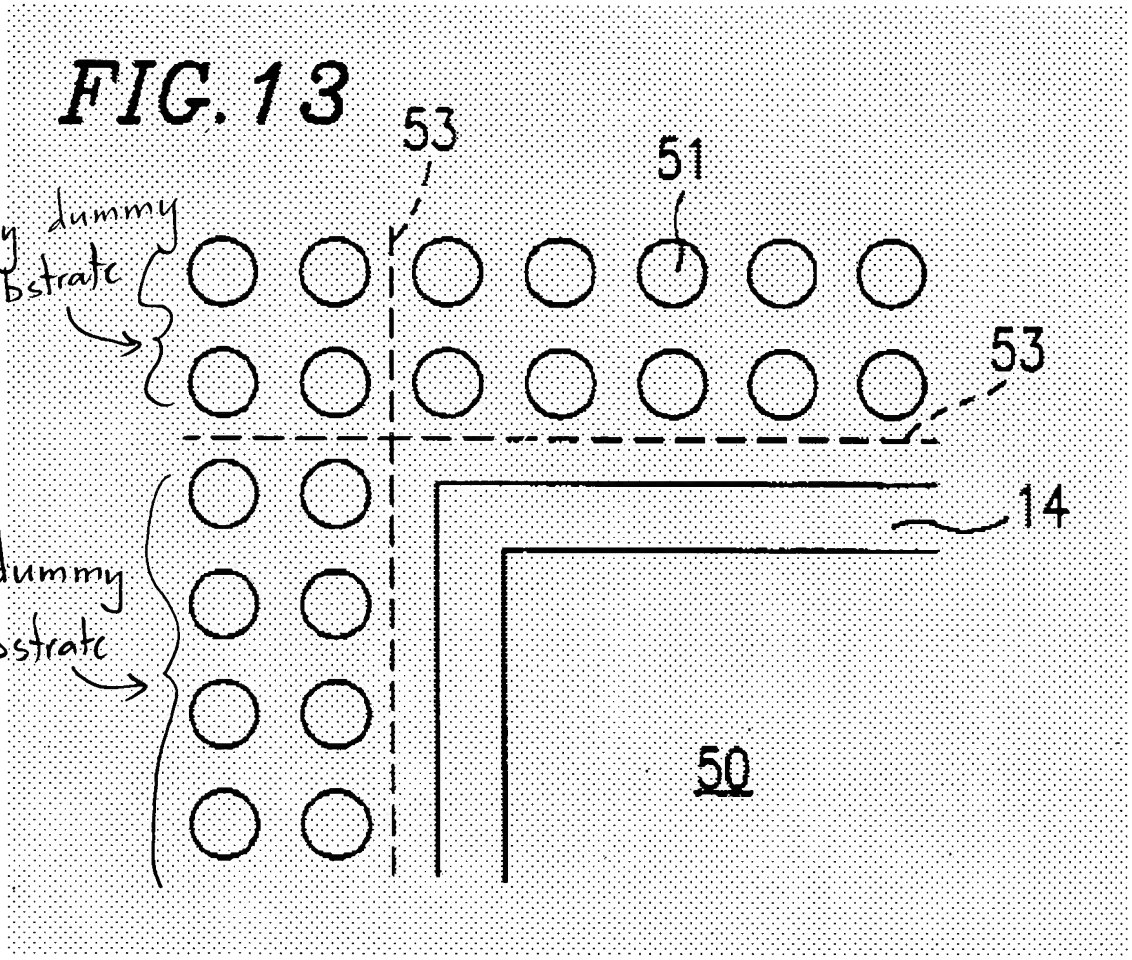
As shown in Fig. 1, Nakahara discloses that a color filter can be formed on at least one of the substrates (col. 9, lines 4-5).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kodera by forming a plurality of color filters on the first substrates for obtaining a color display.

Re claims 2, 3 and 5, Kodera discloses a method of fabricating a liquid crystal display panel that is basically the same as that recited in claims 2, 3 and 5 except for forming a plurality of dummy glass substrates including main dummy glass substrates and secondary glass substrates.

As shown in Figs. 2 and 13, Nakahara discloses a method of fabricating a liquid crystal display panel 50 comprising forming a plurality of dummy glass substrates 22 (seal formation area) including main dummy glass substrates (vertical portion) and secondary glass substrates (horizontal portion) around sealant patterns 14 (see Fig. 13 below), wherein the dummy glass substrates comprises sealant particles 51 having a diameter of 0.2 mm and an interval of 0.6 mm between adjacent sealant particles (col. 12, lines 30-42). Accordingly, the width of the dummy glass substrates in Fig. 13 is less than 3 mm. Also, the sealant patterns 14 are positioned on both the main and secondary dummy glass substrates.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of fabricating a liquid crystal display panel of Kodera with the teaching of Nakahara by forming the dummy glass substrates around the liquid crystal panel to provide a uniform cell gap in the vicinity of injection sealant patterns (col. 7, lines 5-11).



8. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi (USPN 6,864,947 B2) in view of Nakahara et al. (Nakahara, USPN 6,239,855 B1).

Re claim 12, Shiraishi discloses the second substrates 11 have a plurality of thin film transistors, and the first substrates 12 have a color filter (col. 1, lines 19-33)

However, Shiraichi does not discloses a plurality of pixel electrodes formed on the second substrate and a common electrode formed on the first substrate.

As shown in Fig. 1, Nakahara discloses a liquid crystal panel comprising a pixel electrode 6 formed on a second substrate 1 and a common electrode 11 formed on a first substrate 2 (col. 9, lines 11-19).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kodera by forming a plurality of pixel electrodes on the second substrate and a common electrode on the first substrate for driving the liquid crystal display.

Re claim 10, Shiraishi discloses a method of fabricating a liquid crystal display panel that is basically the same as that recited in claim 10 except for forming the secondary dummy glass substrates having a width of less than about 3 mm.

As shown in Figs. 2 and 13, Nakahara discloses a method of fabricating a liquid crystal display panel 50 comprising forming a plurality of dummy glass substrates 22 (seal formation area) including main dummy glass substrates (vertical portion) and secondary glass substrates (horizontal portion) around sealant pattens 14 (see Fig. 13 above), wherein the dummy glass substrates comprises sealant particles 51 having a diameter of 0.2 mm and an interval of 0.6 mm between adjacent sealant particles (col. 12, lines 30-42). Accordingly, the width of the dummy area in Fig. 13 is less than 3 mm.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of fabricating a liquid crystal display panel of Shiraishi with the teaching of Nakahara by forming the dummy glass substrates having a width of less than about 3 mm to provide a uniform cell gap in the vicinity of injection sealant patterns (col. 7, lines 5-11).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (571) 272-2293.

Thoi Duong

03/18/2005

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